

INFLUENCE OF A CHEMICAL PREPARATION OF TRIAZOLE50% CS ON SOWING THE WINTER WHEAT AGAINST RUST

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ABSTRACT

The article is focused on the data of the carried works on studying biological efficiency of fungi Triazole 50% on sowing the winter wheat against yellow rust as well as on the height, development and fertility of the wheat. On May 5, 2019 from 9 to 10 o'clock under the temperature 21-23 field experiments of Triazol 50% CS manufactured by the firm "Agroximstar" (Uzbekistan) were carried out on winter wheat as a protector of seeds of winter wheat of Pervitsa sort against the disease of yellow rust in the irrigated conditions in an experimental field of the Institute "Istiklal" of Andijan district of Andijan region.

The aim of the given research is to study biological-farming efficiency and determination of optimal norms of preparation expenses and to study the influence of fungicide on the height and development as well as on the fertility of the wheat.

The received data showed that the preparation Triazole 50% CS effected on the pathogen of yellow rust favorably and besides that it didn't effect on seed growth and energy of growth negatively.

Keywords: wheat, weed, plant diseases, fungicides, registration, Triazole 50% CS, Tilzol 25% CS

1. INTRODUCTION

Increase of seed production in Uzbekistan is supplied first of all by the rise of fertility. For this it is necessary to use the whole reserves. In conditions of modern intensive farming, the fighting against weeds is one of the important elements of the farming system on which the increase of fertility of agricultural plants depend. Experimental results and the leading experiment of practitioners show that one of the factor of farming intensity do not enable to fall the harms and decrease the pollution of fields besides the special ones that are directed to the fight against diseases and pesticides.

The criteria of effective usage of chemical means of plant protection are the achievement of the given degree of decreasing harmful objects in minimal danger for people and environment.

However, the world's experience show that constant and wide usage of chemical means of narrow spectre of actions result in sharp increase of resistible insects to in sectoaccaricides, phytopathogens to system fungicides, weeds to herbicides of constant apply.

High and stable harvest of cereals can be gained at the expense of intensity of their processing. The basis of this technology is in the placement of the culture in the best predecessors, balanced nutrition of the plant and integrated system of plant protection. In the solution of this global problem it is important to search for and apply of new pesticides of selective actions. Economic fundamentals of it's apply would be determined with the value of crop addition of cereal cultures.

In the increase of fertility of cereal culture an important role plays the protection of plants from diseases which frequently result in considerable fall in grain gathering and worsen of its quality and sometimes to the death of sowings. The degree of impairment from diseases depend on ecological conditions of cultivation and peculiarities of the cultures. In some ecological geographical areas of the country the impairment brings in one disease and in others other diseases.

2. MAIN PART

Processing with chemical means of cereal protection was carried out in Kazakstan[1] on spring wheat and we were able to study the systemic fungicides from the triazole group-Bayleton25%, Tilt 25% cs., Impact 12,5% cs. and Bayfidin 25% cs., where high efficiency against the rust and powdery mildew was identified.

One of the reasons of decreasing the fertility is high pollution of fields, this fact is given in the received data [2]1982. As the experience showed, the applied agro-techniques and means of fighting against the diseases, pesticides and weeds do not bring in favorable results. As is shown in the experiment, they are effective only when applied with additional chemical means of fighting [4].

For the effective apply of pesticides it is important to know the dosage, dates of expire and ways of processing against the diseases. Due to the data [3] (1975) the optimal temperature for the growth of urediniospores of the yellow rust compose 14-16oC: in 4 hours 65-70% spores grow, and under 7-10oC70%

spores grow in 8-9 hours, under 18°C temperature the growth of spores become slower in 4-5 hours. The appear an cecompose 5.4-10,1%, and under 25°C or higher it is not observed.

Thus, the tasks of the research are to determine the biological efficiency of the fungicide Triazole 50% CS. manufactured by "Agroxim Star" (Uzbekistan):

- to study the influence of fungicide on the height and development and fertility of winter wheat. With this point of view we studied the winter wheat of Pervitsasortzoning and in conditions of the Republic.

We applied the preparation on May 5, 2019, in the morning from 9 to 10 under the temperature of 21-23°C. The make of spraying is – Boom sprayer manufactured by Austria, the widthofitits 12 m, in once processing the expense of the working liquid is 300 liters. During the workout the speed of the wind did not exceed 3-4 m/sec.

The experiment was carried out in large scale experiments; the area of plotis 2.0 hectares in 4 times repetition. The experiment was carried out in order to study the biological efficiency of fungicide action of Triazole 50% preparation CS in an experimental field of the Institute of "Istiklal" of Izbaskan district of Andijan region.

Spraying the preparation Triazole 50% C Sagainst brown and yellow rust was carried out on May 5, 2019.Duetotheworkingprogram, the experiments were made by the following scheme:

Table 1.**Scheme of the experiment**

No	Experiment versions	Norms of work outl/ha	Area/ha
1	Control	Without processing	2,0
2	Triazol 50% CS	0.17 l/ha	2,0
3	Tilzol 25% CS	0.5 l/ha	2,0

The area of plot is 2 hectares with 4times repetition. The impairment of sowings with disease complexes of wheat were calculated by monitoring until the processing (May 5) and after the processing with the preparation (May 15)

For carrying out the calculations in all the version sof the experiment, the areas of 1sq.meters situated in 3 different places were separated and all the necessary observations of the height and development of the wheat and weeds were made.

In each registration the degree of impairment by the disease was evaluated by the large scale. The yellow rust was evaluated by the scale of Manners (1950).

One should regard that in the experimental field in 2019 the disease of brown rust was not identified.

Table 2.**Impairment of winter wheat by yellow rust and intensity of disease development up to the processing (May 5, 2019).**

№	Experiment versions	Norms of expensel/ha	Total number of registered plants on 1 sq.m	Impairment		Intensity of disease development, %
				pieces	%	
1	Control	Without working out	417	110,7	26,5	115,7
2	Triazole 50% CS	0,17	415	115,5	27,8	17,2
3	Tilzol 25% Cs (etalon)	0,5	419,5	113,2	27,0	16,5

By the time of working out with fungicide Triazol 50% (May 5, 2019)the average sum of impairment of winter wheat sowing with the yellow rust in the studied fields composed 27.8% and the intensity of the development was17,2% (table 2).

Table 3.**Biological efficiency and intensity of development after the processing against yellow rust on winter wheat (May 25, 2019)**

№	Experiment versions	Norms of expensel/ha	Total number of registered plants 1 sq.m	Impairment		Intensity of disease development %	Biological efficiency
				piece	%		
1	Control	Without working out	417	345,7	82,9	89,7	-

2	Triazole 50% Cs	0,17	415	59,2	14,3	6,7	82,8
3	Tilzol 25% CS	0,5	419,5	64,2	15,3	7,2	81,5

By the data of calculations and observations after 20 days of processing with fungicide Triazole50% CSin the control version, where the processing with fungicide was not carried, the impairment with yellow rust reached 82.9% with the intensity of the disease development reached 89,7%. In the result of the processing the diseased plants with the preparation in 0.17 l/ha norms and the impairment composed 14.3% and the intensity of the disease development composed6.7%.in the etalon version where Trinazol 25% was applied, this index was 15,3-7,2%, it supplied the crop protection from loss due to suppression of the yellow rust.

Table 4.
Influence of fungicides on the crop of seeds of winter wheat.

№	Experiment expenses	Norms of expense	Cereal harvest in repetitions, c/ha				Average fertility of the cereal, c/ha	Harvest addition by the comparison of control/c/ha
1	Control	Processing	63,3	62,7	62,7	64,5	63,3	-
2	Triazol 50% Cs	0,17	65,2	64,5	64,7	65,5	65,0	1,7
3	Tilzol 25% CS (ethanol)	0,5	65,0	63,7	64,7	65,5	64,7	1,4

Biologic efficiency of Triazole 50% fungicide CS, in one studied norm 0,17% l/ha was higher comparing to the etalon Tiazol 25%Cs. The preparation Triazole50% CS, in one studied norm showed the biological efficiency (by the intensity of the disease) on the yellow rust 82.8% and on the etalon 81,5% (table 3).

By the data given in the table 4, the harvest gained after the full ripening of wheat, one can be sure that because of high biological efficiency of the preparation Triazole 50% CS, the harvest of cereals after the work out rose up to 1,7centners per hectare.

CONCLUSION

1. Field researches of fungicide Triazole 50% Cs manufactured by "Agroxim Star" (Uzbekistan) against leaf diseases of yellow rust on sowing winter wheat in conditions of irrigated lands of Andijan region with expense norms of 0.17 l/ha enabled to fall the plants diseased with yellow rust in average to 82.8% and increased the harvest up to 1.7 c/ha in comparison with the control version without processing.

2. We consider that the apply of fungicide Triazole 50% Cs manufactured by "Agroxim Star"(Uzbekistan) with expense norms of 0.17 l/ha is very effective against leaf diseases in sowing winter wheat in irrigated conditions of Andijan region.

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